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=> D HTS
    FILE 'LREGISTRY' ENTERED AT 20:13:44 ON 15 DEC 2010
L1
               STR
    FILE 'REGISTRY' ENTERED AT 20:20:12 ON 15 DEC 2010
L2
               SCR 2043
L3
             0 S L1 AND L2
    FILE 'LREGISTRY' ENTERED AT 20:20:22 ON 15 DEC 2010
L4
                STR L1
    FILE 'REGISTRY' ENTERED AT 20:22:17 ON 15 DEC 2010
L5
             3 S L4 AND L2
L6
                STR L4
L7
             0 S L6 AND L2
L8
            50 S L4
L9
          1187 S L4 FUL
               SAV L9 CON424/A
               E PMS/CT
L10 1371382 S E3
L11
            35 S L10 AND L9
    FILE 'HCA' ENTERED AT 20:29:05 ON 15 DEC 2010
            14 S L11
L12
L13
            10 S 1802-2003/PY, PRY, AY AND L12
    FILE 'REGISTRY' ENTERED AT 20:31:21 ON 15 DEC 2010
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=> D L9 OUE STAT

STR

L4

VAR G1=O/S NODE ATTRIBUTES: DEFAULT MLEVEL IS ATOM DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES: RING(S) ARE ISOLATED OR EMBEDDED NUMBER OF NODES IS 12

STEREO ATTRIBUTES: NONE L9 1187 SEA FILE=REGISTRY SSS FUL L4

100.0% PROCESSED 1482003 ITERATIONS ( 8 INCOMPLETE) 1187 ANSWERS SEARCH TIME: 00.00.02

=> FILE HCA FILE 'HCA' ENTERED AT 20:31:33 ON 15 DEC 2010 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT. PLEASE SEE "HELP USAGETERMS" FOR DETAILS. COPYRIGHT (C) 2010 AMERICAN CHEMICAL SOCIETY (ACS)

=> D L13 1-10 BIB ABS HITSTR HITRN RE

L13 ANSWER 1 OF 10 HCA COPYRIGHT 2010 ACS on STN

AN 141:382155 HCA Full-text

TI Electrode active material for electrochemical device

IN Inatomi, Yuu; Shimada, Mikinari

PA Matsushita Electric Industrial Co., Ltd., Japan

SO U.S. Pat. Appl. Publ., 12 pp.

CODEN: USXXCO

DT Patent LA English

FAN.CNT 1

INN.CNI I									
		PATENT NO.		CIND	DATE	API	PLICATION NO.	DATE	
	PI	US 2004021408	2	A1	20041028	US	2004-827424	20040420	
		EP 1478040		A1	20041117	EP	2004-252356	20040421	
		EP 1478040		B1	20080423				
		JP 2004342605		A	20041202	JP	2004-124954	20040421	
		JP 4468058		B2	20100526				
		CN 1540786		A	20041027	CN	2004-10035314	20040422	
		CN 1264237		C	20060712				
	PRAI	JP 2003-11684	3	A	20030422				
	DOCT.	CHARLES ILLOWODAY	DOD HE	D 2 m D M		TAY 1	CITC DECDE AN HODAWA	77	

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

OS MARPAT 141:382155

GΙ

- AB An electrochem. device of the present invention comprises a pos. electrode, a neg. electrode and an electrolyte, wherein at least one of the pos. electrode and the neg. electrode includes a compd. having a structure represented by the general formula (I); where X is a S atom, a N atom, or an O atom, each of Rl to R4 is independently a linear or cyclic aliph. group, a H atom, a -OH group, a cyano group, an amino group, a nitro group, or a nitroso group; each of R5 and R6 is independently a linear or cyclic aliph. group, the aliph. group includes 21 selected from the group consisting of an O atom, a N atom, a S atom, a Si atom, a P atom, a B atom, and a halogen atom. It is thereby possible to obtain a lightwt. and high energy-d. electrochem. device having an excellent cycle characteristic.
- IT 782452-24-8P 782452-26-0P

(electrode active material for electrochem. device)

RN 782452-24-8 HCA

CN 1,3-Dithiole, 2,2'-(1,2-ethanediylidene)bis-, polymer with ethene (9CI) (CA INDEX NAME)

CM 1 CRN 88312-71-4 CMF C8 H6 S4 √5 СН-СН CM 2 CRN 74-85-1 CMF C2 H4 H2C==CH2 782452-26-0 HCA 1,3-Dithiole, 2-(1,3-dithiol-2-ylideneethylidene)-4-(2-propynyl)-, polymer with ethyne (9CI) (CA INDEX NAME) CM 1 CRN 782452-25-9 CMF C11 H8 S4 CM 2 CRN 74-86-2 CMF C2 H2 HC CH

RN

CN

782452-24-8P 782452-26-0P ΤТ (electrode active material for electrochem. device)

### OSC.G 3 THERE ARE 3 CAPLUS RECORDS THAT CITE THIS RECORD (8 CITINGS)

L13 ANSWER 2 OF 10 HCA COPYRIGHT 2010 ACS on STN

AN 137:370466 HCA Full-text

TΙ Acrylic esters containing 1,3-dithiolane linkage and their use for optical materials

IN Nakamura, Mitsuo; Imai, Masao; Otsuji, Atsuo

PA Mitsui Chemicals, Inc., Japan

SO PCT Int. Appl., 104 pp.

CODEN: PIXXD2 DT Patent

LA Japanese FAN CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002092591	A1	20021121	WO 2002-JP4695	20020515
	AU 2002308979	A1	20021125	AU 2002-308979	20020515
	AU 2002308979	B2	20040923		
	JP 2003160615	A	20030603	JP 2002-140663	20020515
	JP 3820183	B2	20060913		
	EP 1388540	A1	20040211	EP 2002-769605	20020515
	EP 1388540	B1	20070905		
	CN 100344623	C	20071024	CN 2002-801665	20020515
	US 20040102592	A1	20040527	US 2003-332742	20030113
	US 6835844	B2	20041228		
PRAI	JP 2001-144539	A	20010515		
	JP 2001-144540	A	20010515		
	JP 2001-266422	A	20010903		
	JP 2001-281859	A	20010917		
	WO 2002-JP4695	M	20020515		
OS	MARPAT 137-370466				

Acrylic esters which are polymerizable in a short time and useful for AB optical resins with good heat, mech. and refractive properties are diacrylic esters having dithiolane linkage. Acid condensation of 2,3-dimercapto-1propanol with glyoxal, treating the resulting 2,2'-bis[(4hydroxymethyl)dithiolanel with thiourea, hydrolysis of the thiouronium salt, treating the resulting dithiol with 3-chloropropionic acid, and treating with Et3N gave 2,2'-bis[(4-acryloylthiomethyl)dithiolane]. The dithiolane was UV cured with Darocur 1173 in a cell, giving a transparent test piece with refractive index 1.681, Abbe no. 34.6, sp. gr. 1.4, and glass temp. 123°.

TТ 475577-82-3P

(manuf. of acrylic esters contq. 1,3-dithiolane linkage for optical materials)

RN 475577-82-3 HCA

2-Propenethioic acid, S,S'-[1,2-ethanediylebis(1,3-dithiolane-2,4-CN diylmethylene)] ester, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 475577-77-6 CME C16 H22 O2 S6

$$H_2C = CH - \stackrel{0}{C} - S - CH_2 - \stackrel{S}{\underbrace{\hspace{1cm}}} CH_2 - CH_2 - \stackrel{S}{\underbrace{\hspace{1cm}}} CH_2 - S - \stackrel{O}{\underbrace{\hspace{1cm}}} CH_2 - CH_2 - CH_2$$

#### TТ 475577-82-3P

(manuf. of acrylic esters contg. 1.3-dithiolane linkage for optical materials)

- CITED REFERENCES RE
- (1) Essilor Int Cie Gen Optique; JP 2000509075 A 1998
- (2) Essilor Int Cie Gen Optique; US 20020049289 A 1998 HCA
- (3) Essilor Int Cie Gen Optique; FR 2759369 A 1998 HCA
- (4) Essilor Int Cie Gen Optique; EP 901486 A1 1998 HCA
- (5) Essilor Int Cie Gen Optique; WO 9835955 Al 1998 HCA
- (6) Essilor Int Cie Gen Optique; AU 9866269 A 1998 HCA
- (7) Hoya Corp; JP 03-215801 A 1991 HCA
- (8) Mitsui Chem Inc; WO 0192252 A1 2000
- (9) Mitsui Chem Inc: EP 1057808 A2 2000 HCA
- (10) Mitsui Chem Inc; CN 1283614 A 2000 HCA
- (11) Mitsui Chem Inc; JP 2001316355 A 2000 HCA
- (12) Mitsui Chem Inc; JP 200148877 A 2000
- (13) Mitsui Petrochem Ind Co Ltd; JP 04-321662 A 1992 HCA
- OSC.G 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (7 CITINGS)
- L13 ANSWER 3 OF 10 HCA COPYRIGHT 2010 ACS on STN
- AN 137:140883 HCA Full-text
- TT Poly(dibenzylidenetetrathiapentalene): A Redox-Active, Linearly Extended TTF Polymer
- AU Divisia-Blohorn, Bernadette; Genoud, Françoise; Salhi, Fouad; Mueller, Harald
- CS Laboratoire d'Electrochimie Moleculaire et Structure des Interfaces and Laboratoire de Physique des Metaux Synthetiques, Unite Mixte de Recherche CEA-CNRS-Univ.-J. Fourier N° 5819, Grenoble, 38054,
- SO Journal of Physical Chemistry B (2002), 106(26), 6646-6651 CODEN: JPCBFK; ISSN: 1089-5647
- PΒ American Chemical Society
- DT Journal
- LA English
- AB The π-conjugated polymers composed of vinylogous tetrathiafulvalene (TTF) units were obtained by electrochem. polymn. of 2,5-di(benzylidene)-1,3,4,6tetrathiapentalene or of its corresponding dimer 1,2-bis(5-benzylidene[1,3]dithiolo[4,5-d]1,3-dithiole-2- ylidene)-1,2-diphenylethane. The polymers were characterized by cyclic voltammetry (CV), in situ ESR spectroscopy and in situ cond. measurements to gain insight into the charge-discharge behavior and the electronic properties as a function of applied potential. Our results suggest that both compds. behave as conducting polymers exhibiting multistep redox activity. In situ ESR studies show that charge-

discharge phenomena differ in the nature of the charge storage configuration depending on whether they are investigated during a cathodic or anodic scan. Redn. of a polymer film generated at an applied potential of +1.6 V vs SCE allows for the detection of three clearly discernible maxima of the spin d. at 0.60, 0.95, and about 1.25 V vs Aq, while subsequent reoxidn. gives rise to only one spin d. max. at around 0.65 V vs Ag. Coulometric studies suggest that the spin d. max. at around 0.60-0.65 V vs Ag is assocd. with one pos. charge per tetrathiapentalene unit of poly-1 while each monomer bears up to two charges at a potential of 1.6 V vs Ag. In situ and conventional four-probe measurements of the elec. cond. gave values of around 5 + 10-5 S cm-1.

444874-87-7P IT

(prepn. and electrochem. properties of)

RN 444874-87-7 HCA CN

[1,3]Dithiolo[4,5-d]-1,3-dithiole,

2,2'-(1,2-diphenyl-1,2-ethanediylidene)bis[5-(phenylmethylene)-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 189077-89-2 CMF C36 H22 S8

$${\tt Ph-CH} \underbrace{ {\tt S} \underbrace{ {\tt S} \underbrace{ {\tt S} \underbrace{ {\tt CH-Ph} } }_{\tt S} } }_{\tt S} \underbrace{ {\tt CH-Ph} }_{\tt S}$$

444874-87-79 IT

(prepn. and electrochem. properties of)

CITED REFERENCES RE

- (1) Abruna, H; Coord Chem Rev 1988, V86, P135 HCA
- (2) Abruna, H; Electroresponsive Molecular and Polymeric Systems, Chapter 3 1988, V1
- (3) Adam, M; Adv Mater 1994, V6, P439
- (4) Adamo, C; J Phys Chem B 1999, V103, P6863 HCA
- (5) Aubert, P; J Electroanal Chem 1999, V470, P77 HCA
- (6) Becher, J; Electronic Materials: The Oligomer Approach, Chapter 2.2 1998
- (7) Chidsey, C; J Phys Chem 1986, V90, P1484
- (8) Feldman, B; Adv Mater 1995, V7, P48
- (9) Frenzel, S; J Mater Chem 1995, V5, P1529 HCA
- (10) Froyer, G; Synth Met 1989, V33, P381 HCA
- (11) Genoud, F; J Chim Phys 1990, V87, P57 HCA
- (12) Genoud, F; Phys Rev Lett 1985, V55, P118 HCA
- (13) Graf, D; J Am Chem Soc 1999, V119, P5888
- (14) Gruber, H; Synth Met 1991, V41-43, P2331
- (15) Gruber, H; Synth Met 1991, V44, P55 HCA
- (16) Hapiot, P; J Phys Chem A 1999, V103, P11221 HCA
- (17) Hapiot, P; Synth Met 1999, V101, P77 CAPLUS

- (18) Hill, M; Chem Mater 1992, V4, P1106 HCA
- (19) Inzelt, G; J Electroanal Chem Interfacial Electrochem 1983, V159, P443
- (20) Jestin, I; J Am Chem Soc 1998, V120, P8150 HCA
- (21) Kaufman, F; J Am Chem Soc 1979, V102, P483
- (22) Kossmehl, G; Macromolecules 1982, V9, P541
- (23) Lane, R; J Phys Chem 1973, V77, P1401 HCA
- (24) Laviron, E; J Electroanal Chem 1972, V39, P1 HCA
- (25) Laviron, E; J Electroanal Chem 1974, V52, P395 HCA
- (26) Laviron, E; J Electroanal Chem 1979, V105, P25 HCA (27) Levi, M; J Phys Chem B 1999, V103, P1499 HCA
- (28) Levillain, E; J Am Chem Soc 1999, V121, P8760 HCA
- (29) Miller, L; Acc Chem Res 1996, V29, P417 HCA
- (30) Muller, H; Chem Commun 1999, P1407 HCA
- (31) Muller, H; J Chim Phys 1998, V95, P1184 HCA
- (32) Muller, H; Synth Met 1997, V84, P445
- (33) Muller, H; Synth Met 1999, V101, P75
- (34) Muller, H; Synth Met 2001, V119, P195 HCA
- (35) Muller, H; Tetrahedron Lett 1997, V38, P3215 HCA
- (36) Murray, R; J Am Chem Soc 1985, V107, P872
- (37) Nechtschein, M; Handbook of Conducting Polymers, 2nd ed, Chapter 9 1998
- (38) Neudeck, A; J Phys Chem B 1999, V103, P912 HCA
- (39) Neudeck, A; Synth Met 1999, V107, P143 HCA
- (40) Ofer, D; J Am Chem Soc 1990, V112, P7869 HCA
- (41) Park, S; Handbook of Organic Conductive Molecules and Polymers, Chapter 9 1997, V3
- (42) Pham, M; J Electrochem Soc 1993, V140, P912
- (43) Pickup, P; J Mater Chem 1999, V9, P1641 HCA
- (44) Pittman, C; Macromolecules 1976, V9, P360 HCA
- (45) Pittman, C; Macromolecules 1979, V12, P541 HCA (46) Pullen, A; Macromolecules 2001, V34, P812 HCA
- (47) Rapta, P; J Chem Soc, Faraday Trans 1998, V94, P3625 HCA (48) Roncali, J; J Mater Chem 1997, V7, P2307 HCA
- (49) Roth, H; Prog Colloid Polym Sci 1988, V78, P75 HCA
- (50) Roth, H; Prog Colloid Polym Sci 1989, V80, P254 HCA
- (51) Rulkens, R; J Am Chem Soc 1996, V118, P12683 HCA
- (52) Salhi, F; Ph D Thesis, Universite Joseph Fourier 1999
- (53) Schukat, G; Sulfur Rep 1993, V14, P245 HCA
- (54) Shimizu, T; Synthesis 1998, V3, P259
- (55) Thobie-Gauthier, C; Macromolecules 1993, V26, P4094
- (56) Trinh, V; J Prakt Chem 1989, V331, P826 HCA
- (57) Ueno, Y; Chem Lett 1975, P603 HCA
- (58) Yamamoto, T; J Mater Chem 1997, V7, P1967 HCA
- (59) Yamamoto, T; J Mater Chem 1997, V7, P1967 HCA
- (60) Yamamoto, T; Macromolecules 1997, V30, P5390 HCA
- (61) Zhou, M; J Phys Chem B 1999, V103, P8443 HCA
- (62) Zhou, M; J Phys Chem B 1999, V103, P8451 HCA
- (63) Zotti, G; Chem Mater 1991, V3, P62 HCA
- (64) Zotti, G; Chem Mater 2000, V12, P2996 HCA
- OSC.G 3 THERE ARE 3 CAPLUS RECORDS THAT CITE THIS RECORD (3 CITINGS)

L13 ANSWER 4 OF 10 HCA COPYRIGHT 2010 ACS on STN

AN 136:200988 HCA Full-text

4-Methylene-1,3-dioxolanes as odorless crosslinking agents TT

IN Hartl, Helmut; Frings, Rainer B.; Grahe, Gerwald F.

PA Dainippon Ink and Chemicals, Inc., Japan

SO Eur. Pat. Appl., 16 pp.

CODEN: EPXXDW

Patent DT English

LA EAN CHT 1

r AN.	CNII				
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 1182201	A1	20020227	EP 2000-118116	20000825
	EP 1182201	B1	20041124		
	ES 2233255	T3	20050616	ES 2000-118116	20000825
	CA 2355749	A1	20020225	CA 2001-2355749	20010821
	CA 2355749	C	20080923		
	US 20020045674	A1	20020418	US 2001-934655	20010823
	US 6844375	B2	20050118		
	JP 2002155073	A	20020528	JP 2001-254419	20010824
PRA1	EP 2000-118116	A	20000825		

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT OS MARPAT 136:200988

GI

$$\mathbf{X} = \begin{bmatrix} \mathbf{O} \\ \mathbf{O} \end{bmatrix} \mathbf{m} - (\mathbf{CH}_2) \mathbf{n} + \begin{bmatrix} \mathbf{O} \\ \mathbf{R}_1 \end{bmatrix} \mathbf{O} \mathbf{CH}_2$$

AB The invention relates to 4-methylene-1,3-dioxolanes of the general formula I wherein R1 denotes H, C5-6-cvcloalkvl or C1-4-alkvl; m and n, which may be the same or different, denote 0 or 1, whereby  $m \le n$ , o denotes 2, 3 or 4 depending on the valency of the group X; and X denotes a C-C single bond, straight-chain or branched C1-18-alkylene, C5-6-cycloalkylene, C8-18arylalkylene, -CH2(OCH2CH2)pOCH2-, -CH2(OCH(CH3)CH2)pOCH2-, wherein p is an integer from 0 to 100, a process for their prodn. and intermediate products used. Moreover, compns. capable of emission-free, photocationic crosslinking, which comprise 4-methylene-1,3-dioxolanes of the general formula I and their use for the prodn. of solvent-resistant and transparent films. Thus, heating 500 g a .apprx.50% ag. glutardialdehyde soln. with 600 q 3-chloro-1,2-propanediol and .apprx.400 mL PhMe to boiling while removing water (340 mL) over 3-4 h, cooling to room temp., washing, drying, removing PhMe by a rotary evaporator and distg. the residue gave 627 g (88%) 1,3bis(4-chloromethyl-1,3-dioxolane-2-yl)propane (II) with b.p. 138-140° (5x10-3 mbar). Adding II to K tert-butylate dissolved in dry THF while

maintaining at below  $50^{\circ}$  then stirring at room temp. for  $24\ h$  and working up gave

1,3-bis(4-methylene-1,3-dioxolane-2-yl)propane.

IT 401794-52-3P 401794-55-6P 401794-63-6P (manuf. of 4-methylene-1,3-dioxolanes as odorless crosslinking acents)

401794-52-3 HCA

CN 1,3-Dioxolane, 2,2'-(1,2-ethanediy1)bis[2-methy1-4-methylene-, homopolymer (9CI) (CA INDEX NAME)

CM 1

RN

CRN 401794-51-2 CMF C12 H18 O4

RN 401794-55-6 HCA

1

CN 1,3-Dioxolane, 2,2'-(1,3-propanediyl)bis[4-methylene-, polymer with
2,2'-(1,2-ethanediyl)bis[2-methyl-4-methylene-1,3-dioxolane] (9C1)
(CA INDEX NAME)

CM

CRN 401794-51-2 CMF C12 H18 O4

$$\begin{array}{c} \text{Me} \\ \text{CH}_2 - \text{CH}_2 \end{array} \begin{array}{c} \text{Me} \\ \text{CH}_2 \end{array}$$

CM 2

CRN 401793-74-6 CMF C11 H16 O4

RN 401794-63-6 HCA

CN 1,3-Dioxolane, 2,2'-(1,2-ethanediyl)bis[2-methyl-4-methylene-, polymer with 2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bis[4-methylene-1,3-dioxolane] (90I) (CA INDEX NAME)

CM 1

CRN 401794-51-2 CMF C12 H18 O4

CM 2

CRN 401793-97-3 CMF C25 H28 O6

# IT 401794-52-3P 401794-55-6P 401794-63-6P

(manuf. of 4-methylene-1,3-dioxolanes as odorless crosslinking agents)

RE CITED REFERENCES

- (1) Abdullaev, N; 1977 HCA
- (2) Abdullaev, N; KHIM PRIR SOEDIN 1976, V6, P828
- (3) Dynamit Nobel; GB 724032 A
- (4) Sokolov, G: 1965
- (5) Sokolov, G; 1972 HCA
- (6) Sokolov, G; KHIM-FARM ZH 1972, V6(2), P10 HCA
- (7) Sokolov, G: LATVIJAS PSR ZINATNU AKAD VESTIS, KIM SER 1964, V6, P667

- L13 ANSWER 5 OF 10 HCA COPYRIGHT 2010 ACS on STN
- AN 133:80761 HCA Full-text
- TI New electrochemically synthesized copolymers: poly(difluorenyl-ethylenes)
- AU Lorcy, Dominique; Rault-Berthelot, Joelle; Poriel, Cyril
- CS Synthese et Electrosynthese Organiques, UMR CNRS 6510, Universite de Rennes 1, Rennes, 35042, Fr.
- SO Electrochemistry Communications (2000), 2(6), 382-385 CODEN: ECCMF9: ISSN: 1388-2481
- PB Elsevier Science B.V.
- DT Journal
- LA English
- AB Synthesis and cyclic voltammetry data of novel copolymers contg. difluorenyl-ethylene units in the conjugated backbone are reported. The
  - dimer of 2-(dithiafulvenyl)fluorene is chem. and electrochem. formed and electropolymd. and voltammetry of the polymer studied. 1,2-Difluorenyl-1,2-dimethylethene is also electrochem. polymd.
- IT 279668-55-2P
  - (electrochem. prepn. and cyclic voltammetry in CH2C12)
- RN 279668-55-2 HCA
- CN 1,3-Dithiole, 2,2'-(1,2-di-9H-fluoren-2-yl-1,2-ethanediylidene)bis[4,5-dimethyl-, homopolymer (9CI) (CA INDEX NAME)
  - CM
  - CRN 279668-52-9
  - CMF C38 H30 S4

- IT 279668-55-2P
  - (electrochem. prepn. and cyclic voltammetry in CH2C12)
- RE CITED REFERENCES
- (1) Bellec, N; J Electroanal Chem 1999, V462, P137 HCA
- (2) Benahmed-Gasmi, A: Tetrahedron Lett 1995, V36, P2983 HCA
- (3) Burroughes, J; Nature 1990, V347, P539 HCA
- (4) Cho, H; Adv Mater 1997, V9, P326 HCA
- (5) de Leeuw, D; Phys World 1999, V12, P31 HCA
- (6) Friend, R; Nature 1999, V397, P121 HCA
- (7) Gonzalez, S; J Org Chem 1999, V64, P3498 HCA

- (8) Hapiot, P; J Phys Chem 1996, V100, P14823 HCA
- (9) Hascoat, P; J Org Chem 1997, V62, P6086 HCA
- (10) Kido, J; Phys World 1999, V12, P27 HCA
- (11) Kraft, A; Angew Chem Int Ed Engl 1998, V37, P402
- (12) Lorcy, D; J Org Chem 1995, V60, P2443 HCA
- (13) Lorcy, D; Synth Met 1997, V86, P1831 HCA
- (14) Mayer, R; J Prakt Chem 1974, V316, P907 HCA
- (15) Minabe, M; J Org Chem 1976, V41, P1935 HCA
- (16) Moore, A; J Chem Soc Perkin Trans 1 1997, P3443 HCA
- (17) Muller, H; Tetrahedron Lett 1997, V38, P3215 HCA
- (18) Ohmori, Y; Jpn J Appl Phys 1991, V30, PL1941 (19) Ohta, A; J Chem Soc Chem Commun 1995, P1761 HCA
- (20) Pei, Q; J Am Chem Soc 1996, V118, P7416 HCA
- (21) Ranger, M; Macromolecules 1997, V30, P7686 HCA
- (22) Rault-Berthelot, J; Electrochim Acta 1988, V33, P811 HCA
- (23) Rault-Berthelot, J; Recent Res Dev Macromol Res 1998, V3, P425 HCA
- (24) Schoberl, U; Adv Mater 1992, V4, P41
- (25) Yamashita, Y; Chem Commun 1998, P1657 HCA
- (26) Yu, W; Chem Commun 1999, P1837 HCA
- OSC.G THERE ARE 5 CAPLUS RECORDS THAT CITE THIS RECORD (5 CITINGS)
- L13 ANSWER 6 OF 10 HCA COPYRIGHT 2010 ACS on STN
- AN 131:18963 HCA Full-text
- TT Synthesis, X-ray Structure, and Electrochemical Oxidative Coupling
- Reactions of 1,5- and 2,6-Bis(1,4-dithiafulven-6-vl)naphthalenes
- AU Gonzalez, Susana; Martin, Nazario; Sanchez, Luis; Segura, Jose L.; Secane, Carlos; Fonseca, Isabel; Cano, Felix H.; Sedo, Josep; Vidal-Gancedo, Jose; Rovira, Concepcio
- CS Departamento de Ouimica Organica Facultad de Ouimica, Universidad Complutense, Madrid, E-28040, Spain
- SO Journal of Organic Chemistry (1999), 64(10), 3498-3506 CODEN: JOCEAH; ISSN: 0022-3263
- PB American Chemical Society
- DT Journal
- LA English
- OS CASREACT 131:18963
- AB Novel  $\pi$ -extended tetrathiafulvalene (TTF) derivs. I and II [R = H, SMe; RR = SCH2CH2S; R1 = Hexvl, Mel, in which the two 1.3-dithiole units are connected through a naphthalene spacer, have been prepd. in high yields by Wittig-Horner olefination reaction of dialkoxy diformylnaphthalenes and substituted phosphonate esters. The electrochem, study revealed a similar behavior for the novel electron donor mols. I and II regardless of the position of the 1,3-dithiole rings on the naphthalene core. The extended donors undergo an efficient electrooxidn. process affording new oligomeric extended TTF species which exhibit lower oxidn. potential values than their precursor donors. EPR expts. confirm the presence of the cation radical derived from the oligomeric TTF vinvloques and support an ECE (electrochem.-chem.electrochem.) process. The structural study has been carried out by X-ray anal. of I [R = H; R1 = Hexyl] and semiempirical PM3 calcns. and reveals a distorted geometry from planarity with the naphthalene moiety forming an angle of .apprx.35° with the thiafulvalene rings. A good agreement was

found between the exptl. and calcd. values, thus validating the PM3 method. The chem. oxidn. of I and II with strong electron acceptors give charge transfer complexes (CTC) which were characterized by UV-vis, FTIR, and EPR spectroscopy.

IT 226698-09-5P 226698-11-9P 226698-13-1P 226698-14-2P 226698-15-3P 226698-17-5P

226698-18-6P 226698-19-7P 226698-20-0P

226698-21-1P

(charge transfer complex; mol. structure and electrochem. oxidative coupling of tetrathiafulvenes contg. naphthalene spacers prepd. by Wittig-Horner olefination of dithiolylphosphonate esters with diformvlnaphthalenes)

226698-09-5 HCA

Propanedinitrile, 2,2'-(2,5-cyclohexadiene-1,4-diylidene)bis-, compd. with poly[(1,5-dimethoxy-2,6-naphthalenediyl)[1,2-bis[4,5-bis(methylthio)-1,3-dithiol-2-yl]-1,2-ethenediyl]] (9CI) (CA INDEX NAME)

CM 1

RN

CN

CRN 226698-08-4 CMF (C24 H24 O2 S8)n

CCI PMS

CM 2

CRN 1518-16-7 CMF C12 H4 N4

RN 226698-11-9 HCA

CN Propanedinitrile, 2,2'-(2,5-eyclohexadiene-1,4-diylidene)bis-, compd.
with poly[(4,8-dimethoxy-1,5-naphthalenediyl][1,2-bis(1,3-dithiol-2-yl)-1,2-ethenediyl]] (9CI) (CA INDEX NAME)

CM 1

CRN 226698-10-8 CMF (C20 H16 O2 S4)n CCI PMS

CM 2

CRN 1518-16-7 CMF C12 H4 N4

RN 226698-13-1 HCA

CN

CRN 226698-12-0 CMF (C20 H16 O2 S4)n

CCI PMS

CM 2

CRN 84-58-2 CMF C8 C12 N2 O2

CN

RN 226698-14-2 HCA

1,4-Cyclohexadiene-1,2-dicarbonitrile, 4,5-dichloro-3,6-dioxo-, compd. with poly[(1,5-dimethoxy-2,6-naphthalenediy1)[1,2-bis[4,5-bis(methylthio)-1,3-dithiol-2-yl]-1,2-ethenediyl]] (9CI) (CA INDEX NAME)

CM 1

CRN 226698-08-4

CMF (C24 H24 O2 S8)n

CRN 84-58-2 CMF C8 C12 N2 O2

RN 226698-15-3 HCA CN 1,4-Cyclohexadien

1,4-Cyclohexadiene-1,2-dicarbonitrile, 4,5-dichloro-3,6-dioxo-, compd. with poly[(4,8-dimethoxy-1,5-naphthalenediy1)][1,2-bis(1,3-dithiol-2-y1)-1,2-ethenediy1]] [9(1) (CA INDEX NAME)

CM 1

CRN 226698-10-8 CMF (C20 H16 O2 S4)n

CRN 84-58-2 CMF C8 C12 N2 O2

CN

RN 226698-17-5 HCA

1,4-Cyclohexadiene-1,2-dicarbonitrile, 4,5-dichloro-3,6-dioxo-, compd. with poly[(4,8-dimethoxy-1,5-naphthalenediy1)[1,2-bis[4,5-bis(methylthio)-1,3-dithio1-2-yl]-1,2-ethenediy1]] (9CI) (CA INDEX NAME)

CM 1

CRN 226698-16-4

CMF (C24 H24 O2 S8)n

CRN 84-58-2 CMF C8 C12 N2 O2

RN 226698-18-6 HCA CN Cyanamide, (2,3-

Cyanamide, (2,3-dichloro-5,6-dimethyl-2,5-cyclohexadiene-1,4-diylidene)bis-, compd. with poly[(1,5-dimethoxy-2,6-naphthalenediyl)[1,2-bis(1,3-dithiol-2-yl)-1,2-ethenediyl]] (9CI) (CA INDEX NAME)

CM 1

CRN 226698-12-0 CMF (C20 H16 O2 S4)n

CRN 157788-94-8 CMF C10 H6 C12 N4

RN 226698-19-7 HCA CN Cyanamide, (2,3-

Cyanamide, (2,3-dichloro-5,6-dimethyl-2,5-cyclohexadiene-1,4-diylidene)bis-, compd. with poly[(1,5-dimethoxy-2,6-naphthalenediyl)[1,2-bis[4,5-bis(methylthio)-1,3-dithiol-2-yl]-1,2-ethenediyl)] (9CI) (CA INDEX NAME)

CM 1

CRN 226698-08-4 CMF (C24 H24 O2 S8)n

CRN 157788-94-8 CMF C10 H6 C12 N4

RN 226698-20-0 HCA

CN Cyanamide, (2,3-dichloro-5,6-dimethyl-2,5-cyclohexadiene-1,4-diylidene)bis-, compd. with poly[(4,8-dimethoxy-1,5-naphthalenediyl)[1,2-bis(1,3-dithiol-2-yl)-1,2-ethenediyl]] (9CI) (CA INDEX NAME)

CM 1

CRN 226698-10-8 CMF (C20 H16 O2 S4)n CCI PMS

CM 2

CRN 157788-94-8 CMF C10 H6 C12 N4

RN 226698-21-1 HCA CN Cvanamide, (2,3-c

Cyanamide, (2,3-dichloro-5,6-dimethyl-2,5-cyclohexadiene-1,4-diylidene)bis-, compd. with poly[(4,8-dimethoxy-1,5-naphthalenediyl)[1,2-bis[4,5-bis(methylthio)-1,3-dithiol-2-yl]-1,2-ethenediyl]] (9CI) (CA INDEX NAME)

CM 1

CRN 226698-16-4 CMF (C24 H24 O2 S8)n

CCI PMS

CM 2

CRN 157788-94-8 CMF C10 H6 C12 N4

IT 226698-09-5P 226698-11-9P 226698-13-1P 226698-14-2P 226698-15-3P 226698-17-5P 226698-18-6P 226698-19-7P 226698-20-0P 226698-21-1P

(charge transfer complex; mol. structure and electrochem. oxidative coupling of tetrathiafulvenes contg. naphthalene spacers prepd. by Wittig-Horner olefination of dithiolylphosphonate esters with diformylnaphthalenes)

## RE CITED REFERENCES

- (1) Akiba, K; Bull Chem Soc Jpn 1978, V51, P2674 HCA
- (2) Altomate, A; Dipartimento Geomineralogico 1992
- (3) Anon; International Tables for X-Ray Crystallography 1974, V4
- (4) Awaji, H; Chem Mater 1989, V1, P535
- (5) Benahmed-Gasmi, A; Tetrahedron Lett 1995, V36, P2983 HCA
- (6) Brisset, H; J Chem Soc Chem Commun 1994, P1765 HCA
- (7) Bryce, M; Angew Chem Int Ed Engl 1990, V29, P1450
- (8) Bryce, M; Chem Mater 1996, V8, P1182 HCA
- (9) Bryce, M; J Mater Chem 1995, V5, P1481 HCA
- (10) Bun-Hov, N; J Org Chem 1955, V20, P1191
- (11) De Lucas, A; Tetrahedron 1998, V54, P4655 HCA
- (12) Faldt, A; Synth Met 1998, V94, P307 HCA
- (13) Fisher, P; J Am Chem Soc 1963, V85, P2694 (14) Fourmique, M; J Am Chem Soc 1993, V115, P3752 HCA
- (15) Garin, J; Tetrahedron Lett 1998, V39, P3577 HCA
- (16) Gonzalez, M; Tetrahedron Lett 1998, V39, P3269 HCA
- (17) Hall, S; XTAL3.2 System 1994
- (18) Hapiot, P; J Phys Chem 1996, V100, P14823 HCA
- (19) Herranz, M; Tetrahedron 1998, V54, P11651 HCA
- (20) Hunig, S; Int J Sulfur Chem C 1971, V6, P109
- (21) IIanack, M; Adv Mater 1996, V8, P663
- (22) IIascoat, P; J Org Chem 1997, V62, P6086
- (23) Jen, A; J Chem Soc Chem Commun 1994, P2057 HCA
- (24) Khodorkovsky, V; Organic Conductors: Fundamentals and Applications 1994, P75 HCA
- (25) Lorcy, D; J Org Chem 1995, V60, P2443 HCA
- (26) Martin, N; J Org Chem 1998, V63, P1268 HCA
- (27) Martin, N; Synth Met 1994, V64, P83 HCA
- (28) Martin, N; Synth Met 1996, V76, P137
- (29) Martinez-Ripoll, M; PESOS A Computer Program for the Automatic Treatment of Weighting Schemes 1975
- (30) Miller, J; J Am Chem Soc 1986, V108, P4459 HCA
- (31) Moore, A; J Chem Soc Perkin Trans 1 1991, P157 HCA

- (32) Moore, A; Synthesis 1991, P26 HCA
- (33) Nardelli, M; Comput Chem 1973, V7, P95
- (34) Ohta, A; Heterocycles 1995, V40, P123 HCA
- (35) Papavassiliou, G; Organic Conductive Molecules and Polymers 1997, P151
- (36) Roncali, J; J Mater Chem 1997, V7, P2307 HCA
- (37) Schoberl, H; Adv Mater 1992, V4, P41
- (38) Sieiro, C; Anal Quim Ser A 1984, V80, P328 HCA
- (39) Steimecke, G; Phosphorus Sulfur 1979, V7, P49 HCA
- (40) Stewart, J; The XRAY80 System 1980
- (41) Sukumar, K; Synthesis 1987, P837
- (42) Takahashi, K; J Chem Soc Chem Commun 1991, P821
- (43) Takahashi, K; J Chem Soc Chem Commun 1993, P1617 HCA
- (44) Terahara, A; Bull Chem Soc Jpn 1984, V57, P1760 HCA
- (45) Williams, J; Organic Superconductors 1992
- (46) Wudl, F; J Chem Soc Chem Commun 1970, P1453 HCA
- (47) Yamashita, Y; Angew Chem Int Ed Engl 1989, V28, P1052
- (48) Yoshida, Z; Tetrehedron Lett 1983, V24, P3469 HCA
- OSC.G 27 THERE ARE 27 CAPLUS RECORDS THAT CITE THIS RECORD (27 CITINGS)
- L13 ANSWER 7 OF 10 HCA COPYRIGHT 2010 ACS on STN
- AN 107:64917 HCA Full-text
- OREF 107:10649a,10652a
- Decrosslinkable surgical materials TT
- TN Hishida, Yasuto
- PA Toyo Contact Lens Co., Ltd., Japan
- SO Jpn. Kokai Tokkyo Koho, 8 pp. CODEN: JKXXAF
- DT Patent
- T 70 Japanese

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	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 62053664	A	19870309	JP 1985-192989	19850830
PRAI	JP 1985-192989		19850830		

- Copolymer contq. a crosslinking agent with covalent bond capable to be opened and lost crosslinking effect by acid treatment have processable hardness before the treatment and air permeability, water absorbability, and flexibility after the treatment. A mixt. of lauryl methacrylate 36, 1,2bis[2-(4-methacyloyloxymethyl-2-methyl-1,3-dioxolanyl)]ethane 64, and 2,2'azobis(2,4-dimethylvaleronitrile) 0.1 part was heated 24 h at 35°, 24 h at 50°, and 24 h at 50-110°, processed and polished to give an article, swelled overnight in water, dipped overnight in 4 N ag. HCl, neutralized with 1% ag. Na2CO3, dipped overnight in water, and dipped in boiling salt soln. to give an article having Rockwell hardness 0.5, water content 37.8%, O(g) permeability 16.9 + 1010 cm3.cm/cm2.s.cmHq, and good transparency.
- 109664-69-9 IT
  - (acid treatment of, for prosthetic materials)
- RN 109664-69-9 HCA
- CN 2-Propenoic acid, 2-methyl-, 1,2-ethanediylbis[(2-methyl-1,3-dioxolane-2,4-divl)methylenel ester, polymer with dodecyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CRN 109664-68-8 CMF C20 H30 O8

$$\stackrel{\text{H2C}}{\text{Me}} = \stackrel{\text{O}}{\text{C}} = 0 - \text{CH}_2 = 0 - \text{CH}_2 - \text$$

CM 2

CRN 142-90-5 CMF C16 H30 O2

### TT 109664-69-9

(acid treatment of, for prosthetic materials)

L13 ANSWER 8 OF 10 HCA COPYRIGHT 2010 ACS on STN AN 80:37494 HCA Full-text

OREF 80:6165a,6168a

TI Synthesis of a hybrid spiro-ladder polymer

AU Bailey, William J.; Feinberg, Jay H.

CS Dep. Chem., Univ. Maryland, College Park, MD, USA

SO Polymer Preprints (American Chemical Society, Division of Polymer Chemistry) (1972, 13(1), 287-91
CODEN: ACPPAY: ISSN: 0032-3934

DT Journal

LA English

AB The dispiro bisdiene 3,4,11,12-tetramethylene-1,6,9,14-

 $\label{tetraoxadispiro} $$\text{tetraoxadispiro}[6.2.6.2]$ octadecane (I) was prepd. by heating $3,4,11,12-di(2'-dioxothiopropano)-1,6,9,14-tetraoxadispiro[6.2.6.2]-$3,11-$$$$$ 

octadecadiene [obtained from

3,4-di(hydroxymethyl)-2,5-dihydrothiophene 1,4-dioxide and 1,4-cyclohexanedione] at 200-15.deg. for 45 min. to release SO2. The I was treated with the 20-membered tetramethylene glycol maleate cyclic dimer in DMF 1 day at 5.deg., 8 days at room temp., and 1 day at 76.deg. to yield 52% polymer (II) [50601-59-7]. II was infusible but sol. in

hexafluoroisopropanol at room temp. and in glutaronitrile (III) at 180.deg.. When prepd. in a III-CH2Cl2 mixt. at 5.deg. for 1 day, room temp. for 4

days, and  $110.\deg$  for 1 day, the II was cryst. and was sol. in CH2Cl2 at room temp.

IT 50979-25-4P

(prepn. of)

RN 50979-25-4 HCA

CN Poly(6,6a,7,9,10,11,12,14a,15,16,21,21a,22,24,25,26,27,29,29a,30eicosahydro-7,14,22,29-tetraoxo-1H,5H,14H,20H[1,6,11,16]tetraoxacycloeicosino[3,4-h:13,14-h']bis[2,4]benzodioxepin3,18-divlidene-18,18-di-1,2-ethanedivl) (9CI) (CA INDEX NAME)

PAGE 1-A

PAGE 1-B

IT 50979-25-4P

(prepn. of)

- L13 ANSWER 9 OF 10 HCA COPYRIGHT 2010 ACS on STN
- AN 78:16492 HCA Full-text

OREF 78:2627a,2628a

- TI New spiro polymers containing five-, six-, seven-, and eight-membered cyclic ketals
- AU Bailey, William John; Beam, Carles F., Jr.; Haddad, Ibrahim
- CS Dep. Chem., Univ. Maryland, College Park, MD, USA
- SO Polymer Preprints (American Chemical Society, Division of Polymer Chemistry) (1971), 12(1), 169-76 CODEN: ACPPAY; ISSN: 0032-3934
- DT Journal
- LA English

AB Tetrols prepd. were treated with cyclic diketones to give polyspiroketal ladder polymers. Spiro monomers prepd. include 7,14,21,26tetraoxatetraspiro[5,2,2,2,5,2,2,2]hexacosane [37571-44-1], 7,14,21,25tetraoxatetraspiro[5.2.2.2.5.2.1.2]-23-pentacosanone [37571-45-2], and cis, cis-2,3:10,11-bis(tetramethylene)-1,4,9,12tetraoxadispiro[4.2.4.2]tetradecane [37571-46-3]. Also prepd. were 1,4cyclohexanedione-1,1,4,4-tetrakis(hydroxymethyl)cyclohexane copolymer (I) [37450-54-7], 1,4-cvclohexanedione-1,2,4,5tetrakis(hydroxymethyl)cyclohexane copolymer (II) [37450-55-8], 1,4cyclohexanedione-2,2,5,5-tetrakis(hydroxymethyl)cyclopentanone copolymer (III) [37450-56-9], meso diastereomeric cis, cis-1, 2, 4, 5-cyclohexanetetrol-1,4-cyclohexanedione copolymer (IV) [37450-57-0], 2,7-decalindione-1,2,4,5tetrakis(hydroxymethyl)cyclohexane copolymer (V) [37450-58-1], and 1,4,5,8tetrakis(hydroxymethyl)-1,2,3,4-tetrahydronaphthalene-1,4- cyclohexanedione copolymer (VI) [37450-59-2].

IT 39723-72-3p 39723-73-4p 39723-74-5p 39861-81-9p

(prepn. of)

RN 39723-72-3 HCA

CN Poly[(hexahydrobenzo[1,2-d:4,5-d']bis[1,3]dioxole-2,6-diylidene)-6,6di-1,2-ethanediyl] (9CI) (CA INDEX NAME)

RN 39723-73-4 HCA

CN Poly(octahydro-1H,5H-benzo[1,2-e:4,5-e']bis[1,3]dioxepin-3,9-diylidene-9,9-di-1,2-ethanediyl) (9CI) (CA INDEX NAME)

RN 39723-74-5 HCA

CN Poly[(7-oxo-2,4,10,12-tetraoxadispiro[5.1.5.3]hexadecane-3,11-diylidene)-11,11-di-1,2-ethanediyl] (9CI) (CA INDEX NAME)

RN 39861-81-9 HCA

CN Poly[(1,5,5a,6,7,7a,8,12-octahydronaphtho[1,8-ef:4,5e'f']bis[1,3]dioxocin-3,10-diylidene)-10,10-di-1,2-ethanediyl] (9CI)
(CA INDEX NAME)

IT 39723-72-3P 39723-73-4P 39723-74-5P 39861-81-9P

(prepn. of) OSC.G 2 THERE

DSC.G 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)

L13 ANSWER 10 OF 10 HCA COPYRIGHT 2010 ACS on STN

AN 77:20050 HCA Full-text

- OREF 77:3365a,3366a
  TI Synthesis of sulfur-containing spiro polymers
- AU Bailey, William J.; Hinrichs, Robert L.
- CS Dep. Chem., Univ. Maryland, College Park, MD, USA
- SO Polymer Preprints (American Chemical Society, Division of Polymer Chemistry) (1970), 11(2), 598-605
  - CODEN: ACPPAY; ISSN: 0032-3934
- DT Journal
- LA English
- AB C(CH2SH)4 (I) and cyclohexanone (using p-toluenesulfonic acid catalyst) gave 7,11,18,21-tetrathiatrisopiro[5.2.2.5.2.2]heneicosane (II) [183-11-9], while 1,3-propanedithiol and 1,4-cyclohexanedione (III) gave 2,5,10,14-tetrathiadispiro[5.2.5.2]hexadecanes (IV) [34982-16-6]. I and III gave poly[3.3-bis(thiamethyl)-1,5-dithiaspiro[5.5]undecan-9-xylidene] (V) [34937-23-0], while I and 1,10-cyclooctadecanedione gave poly[3,3-

bis(thiamethyl)-1,5-dithiospiro[5.17]tricosan-15-ylidene] (VI) [34978-50-2]. II, IV, V, and VI were oxidized to their sulfones and(or) sulfoxides.

IT 34937-23-0P 36812-74-5P 36813-57-7P

(prepn. of)

RN 34937-23-0 HCA

CN Poly(2,4,8,10-tetrathiaspiro[5.5]undecane-3,9-diylidene-9,9-di-1,2ethanediyl) (9CI) (CA INDEX NAME)

RN 36812-74-5 HCA

CN Poly[(2,4,8,10-tetraoxido-2,4,8,10-tetrathiaspiro[5.5]undecane-3,9diylidene)-9,9-di-1,2-ethanediyl] (9CI) (CA INDEX NAME)

RN 36813-57-7 HCA

CN Poly[(2,2,4,4,8,8,10,10-octaoxido-2,4,8,10-tetrathiaspiro[5.5]undecane-3,9-diylidene)-9,9-di-1,2-ethanediyl] (9CI) (CA INDEX NAME)

IT 34937-23-0P 36812-74-5P 36813-57-7P (prepn. of)